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Snuggling / Soft Key

Snuggling Snuggling is a method used by operators of surveillance equipment. A surveillance equipment operator, when building radio transmitters, will select a transmitter frequency close to that of a nearby high powered transmitter, usually, a commercial radio station. Most ordinary radio gear will automatically tune into the stronger of the two signals. The operator must use a specially modified receiver capable of detecting and isolating the weaker signal. "Snuggling" will be difficult to detect by low quality RF receivers when making a countermeasure sweep.

SO Serving Office. Central office where IXC (InterExchange Carrier) has POP (Point Of Presence).

Soak A means of uncovering problems in software and hardware by running them under operating conditions while they are closely supervised by their developers.

SOAP Simple Object Access Protocol (SOAP) is new "open" software developed by Microsoft for exchanging information over the Web based on a standard called the Extensible Markup Language (XML). SOAP will be open if it's ever adopted by a standards body or sufficient number of programmers program to it and it becomes a defacto standard. SOAP is actually a network protocol that lets software objects developed using different languages communicate with each other. Microsoft sees it as leveling the playing field between Windows and development strategies based on Java. Instead of being forced to chose one model, companies will be free to select whichever is best suited to solving the problem at hand, Microsoft argues.

At issue is the slugfest between Microsoft and its competitors over the programming models software developers use. Microsoft has its own programming model based on the Windows operating system, called the Component Object Model (COM). Its competitors support Enterprise JavaBeans (EJBs) and Common Object Request Broker Architecture (CORBA), two programming models that are tightly integrated with each other.

SOAP would replace Microsoft's current proprietary protocol called DCOM for communication over the Internet. Because SOAP is based on XML, it's compatible with all programming models and allows businesses to exchange data with each other over the Internet.

SOC System-On-a-Chip. A silicon integrated circuit which combines generic functions (e.g., microcontrollers, UARTs, memory, FIFOs, and other analog and digital logic functions) with custom design elements to create a device that contains all major elements of a system on one integrated chip. This is one method of increasing design productivity. The SOC designer collects and integrates pre-defined (and pre-tested) components similar to the way hardware designers collect and interconnect integrated circuits on a circuit board design. The final implementation of an SOC may be in an ASIC or FPGA. Also see ASIC and FPGA. Thanks to Ken Coffman for this definition.

Social Computing A term that emerged in the summer of 1993. Defined by Peter Lewis in the New York Times of September 19, 1993, social computing is a "communications-rich brew," which is "expected to create new ways for businesses and their customers to communicate, over new types of wireless as well as wired pathways, using new types of computers called personal communicators." According to Peter Lewis, "The rise of social computing is expected to shift the emphasis of computing devices away from simple number crunching and data base management to wider-ranging forms of business communications...Where client server broke away from mainframe-based systems and distributed computing power to everyone in the organization, social computing goes the next step and extends the distribution of computing power to a company's customers."

Social Contract An arrangement between the local telephone company and its local regulatory authority whereby the telephone company's services are detariffed, but cannot be priced at less than cost. Quality of service standards apply.

Social Engineering Gaining privileged information about a computer system (such as a password) by skillful lying — usually via a phone call. Often done by impersonating an authorized user.

Socket 1. A synonym for a port.

2. A technology that serves as the endpoint when computers communicate with each other.

3. The socket in a PC which is responsible for accepting a PCMCIA Card and mapping the host's internal bus signals to the PCMCIA interface signals.

4. An operating system abstraction which provides the capability for application programs to automatically access communications protocols. Developed as part of the early work on TCP/IP.

Socket Interface The Sockets Interface, introduced in the early 1980s with the release of Berkeley UNIX, was the first consistent and well-defined application programming interface (API). It is used at the transport layer between Transmission Control Protocol (TCP) or User Datagram Protocol (UDP) and the applications on a system. Since 1980,

sockets have been implemented on virtually every platform.

Socket Number In TCP/IP, the socket number is the joining of the sender's (or receiver's) IP address and the port numbers for the service being used. These two together uniquely identifies the connection in the Internet.

Socket Services The software layer directly above the hardware that provides a standardized interface to manipulate PCMCIA Cards, sockets and adapters. Socket Services is a BIOS level software interface that provides a method for accessing the PCMCIA slots of a computer, desktop or laptop (but most typically a laptop). Ideally, socket services software should be integrated into the notebook's BIOS, but few manufacturers have done so to date. For PCMCIA cards to operate correctly you also need Card Services, which is (not are) a software management interface that allows the allocation of system resources (such as memory and interrupts) automatically once the Socket Services detects that a PC Card has been inserted. You can, however, happily operate PCMCIA cards in your laptop without using socket and card services. You simply load the correct device drivers for those cards. Such drivers always come with PCMCIA cards when you buy the cards. You will, however, have to load new drivers every time you change cards and allocate the correct memory exclusions. You will have to reboot if you disconnect your network card. Theoretically, with socket and card services loaded, you do not have to reboot every time you change cards. My experience is that this works, except with network cards, which cannot be hotswapped. See PCMCIA.

Sockets An application program interface (API) for communications between a user application program and TCP/IP. See Socket and Socket Number.

SOCKS A circuit-level security technology developed by David Koblas in 1990 and since made publicly available by the IETF (Internet Engineering Task Force). SOCKSv5, the current version, provides security in a client/server environment, running at the Session Layer, Layer 5 of the OSI Reference Model. SOCKSv5 supports multiple means of authentication, negotiated between client and server over a virtual circuit, and on a session-by-session basis. SOCKSv5 also supports the transfer of UDP data as a stream, avoiding the need to treat each packet of UDP data as an independent message. SOCKSv5 also allows protocol filtering, which offers enhanced access control on a protocol-specific basis. For example, a network administrator can add a SMTP (Simple Mail Transfer Protocol) filter command to prevent hackers from extracting from a mail message information such as a mail alias. Reference implementations exist for most UNIX platforms, as well as Windows NT. The cross-platform nature of SOCKS offers portability to Macintosh and other operating systems and browsers. According to Network World Magazine, September 27, 1999, "the latest version of SOCKSv5 offers network managers an easier way to run videoconferencing and video and audio streaming through firewalls, which has been difficult and time-consuming. Socks v5 does this by providing a single and powerful method of authenticating users and managing security policies for all Internet applications, including multimedia." SOCKSv5 also interoperates on top of IPv4, IPsec, PPTP, L2TP and other lower-level protocols.

SOFT Start Of File

Soft Copy 1. A copy of a file or program which resides on magnetic medium, such as a floppy disk, or any form that is not a hard copy — which is paper.

2. Old legacy systems term reapplied to distributed computing in which reports are created on-screen from data residing within different applications.

Soft Decision See SISQ.

Soft Ferrite Ferrite that is magnetized only while exposed to a magnetic field. Use to make cores for inductors, transformers, and other electronic components. See Barium Ferrite, Ferrite and Hard Ferrite.

Soft Font A font, usually provided by a font vendor, that must be installed on your computer and sent to the printer before text formatted in that font can be printed. Also known as downloadable font.

Soft Handoff 1. A cellular radio term. A soft handoff is a handoff between cell sites that involves first making the connection with the new cell site before breaking the connection with the previous cell site. A hard handoff, or "break and make" handoff, is not noticeable in a voice conversation, but has disastrous impact on a data communication. See also Hard Handoff.

2. A satellite term. The process of transferring a circuit from one beam or satellite to another without interruption of the call.

Soft Input-Soft Output See SISQ.

Soft Key There are three types of keys on a telephone: hard, programmable and soft. HARD keys are those which do one thing and one thing only, e.g. the touchtone buttons 1, 2, 3, *, and # etc. PROGRAMMABLE keys are those which you can program to do produce a bunch of tones. Those tones might be "dial mother." They might be "transfer to

3. Application Software Interface. An ISDN term. See Application Software Interface.

4. Adapter Support Interface. The driver specification developed by IBM for networking over IEEE 802.5 Token-Rings.

Asia-Pacific Telecommunity APT. A telecommunications organization for the Asia Pacific region.

ASIC Application-Specific Integrated Circuit. A silicon chip that is custom-designed for a particular purpose, at least that's the pure definition. In actuality, the term is misleading because many ASICs are designed to perform multiple, generalized tasks. From the manufacturer's point of view, a microprocessor is an ASIC, though they can and are used for widely disparate purposes in the field. An ASIC requires large production volumes to be economical; long design cycles and high-priced design tools (and designers) make them expensive to create, but inexpensive to produce in high-volumes. Manufacturers use ASICs to consolidate many chips into a single package, thereby reducing system board size and power consumption. Many video boards and modems use ASICs. ASICs span programmable array logic (PAL) devices, electrically programmable logic devices (EPLDs), field programmable logic devices (FPGAs), gate arrays, standard cell-based devices, and full custom, designed-from-scratch ICs. See also ASSP, FPGA, and SOC.

ASIC Chip Application Specific Integrated Circuit Chip. A fancy name for microprocessor chips which do specific tasks. For example, an ASIC chip might be responsible for a graphics display. See ASIC.

ASL Adaptive Speed Leveling. A US Robotics term for adjusting the transmission speed of a modem up or down, depending on the conditions on the line. US Robotics says it can adjust speed in 2 or 3 seconds after detecting changed line conditions. It requires like modems on either end of the transmission.

ASMTSP See Authenticated SMTP.

ASN.1 Abstract Syntax Notation One. LAN "grammar," with rules and symbols, that is used to describe and define protocols and programming languages. ASN.1 is the OSI standard language to describe data types. The Abstract Syntax Notation is a formal language defined by ITU X.208 and ISO 8824. Under both CMIP and SNMP, ASN.1 defines the syntax and format of communication between managed devices and management applications. See CMIP, SNMP. For a fuller definition, see Abstract Syntax Notation One.

ASOC Technology This definition from Bookham Technology: ASOC technology is the fabrication of integrated optical components from a base material of silicon. Silicon has excellent optical properties including a low optical loss at 1310nm and 1550nm — the wavelength bands at which to transmit telecommunication signals. Silicon is the world's best known manufacturing material and benefits from the mature manufacturing processes of the microelectronic industry to significantly reduce the complexity of design and manufacture. Manufacturing ASOC devices fundamentally involves the construction of low-loss, single-mode waveguides onto silicon-on-insulator wafers. Library elements, such as couplers and modulators, and hybridized active elements, such as lasers and photodiodes, are combined to provide devices with a wide range of functionality. Consequently compact and versatile integrated optical components can be produced in high volume and at low cost. The flexible nature of ASOC technology means it can also be utilized to provide application specific, high functionality, high value devices including Arrayed Waveguide Gratings (AWG) and Variable Optical Attenuators (VOA).

ASP.1 A Northern Telecom term for Attached Support Processor.

2. Adjunct Service Point. An intelligent-network feature that resides at the intelligent peripheral equipment and responds to service logic interpreter requests for service processing. See also AIN.

3. Administrable Service Provider. A SCSA term.

4. Abstract Service Primitive. An ATM term. An implementation-independent description of an interaction between a service-user and a service-provider at a particular service boundary, as defined by Open Systems Interconnection (OSI).

5. Application Service Provider. See Application Service Provider.

6. Active Server Page. A dynamic HTML scheme designed by Microsoft that is a combination of HTML and VBScript (Visual Basic Script). Active Server Pages, or ASP for short, generate HTML on your Web server and send it to your browser. Perl for Win32 and PerlScript are required on your server but they are not required on the clients. See also JHTML.

Aspect Ratio The ratio of width to height of a computer display or TV screen. The aspect ratio of NTSC and PAL TV is four units of width to every three units of height. This is expressed as 4 x 3 aspect ratio. A 35 mm frame measures 12 x 24 mm, which means it has two units of width to one unit of height. It is different in size from a TV screen. This is why the side parts of movies are chopped off on TV. For VGA and Indeo video technology, the aspect ratio is 4:3 yielding today's standard PC screen sizes in pixels of 640 x 480 and 1024 x 768.

ASPI Advanced SCSI Programming Interface set. In other words, software primitives and data structures which allow software using the ASPI interface to be SCSI host adapter-independent. SCSI stands for Small Computer System Interface. (Pronounced Scuzzie.) ASPI is software that acts as a liaison between SCSI device drivers (the software that drives the SCSI devices) and the interface card (also known as the host adapter). Whenever a new device is added to a computer system, a software program called a "driver" must tell the computer how to talk to the new device. Instead of forcing vendors to write drivers for every host adapter, ASPI lets them write a driver to ASPI standards, supposedly guaranteeing that the device the driver controls will work with all ASPI-compatible host adapters. The idea behind ASPI is to create a "black box" software interface - one which allows programmers to create software without having to know anything about the details of the SCSI interface hardware used in your computer. With ASPI, it's possible to write programs that can be used with any SCSI-based device used on a computer system that supports ASPI. While things are not always 100% perfect in all cases, ASPI greatly reduces potential compatibility problems for you, the user.

How does ASPI work? Essentially, there are two parts to an ASPI implementation. First, there's the ASPI "manager" which is a device driver supplied by the hardware manufacturer, and the ASPI software application. It's important to note that without an ASPI manager, ASPI compatibility is not possible. It's the manager that creates the standard ASPI-compatibility layer between the SCSI host adapter hardware and the ASPI-compatibility application. The manager is very hardware-specific, and is almost always supplied by the manufacturer of your SCSI host adapter.

ASQ Automated Status Query.

ASR.1 Automatic Speech Recognition. See Interactive Voice Response.

2. Automatic Send Receive. A teletype or telex machine manufactured by the old Teletype Corporation. Such a hard-copy terminal, if left on and loaded with paper, will receive incoming messages and print them, even when nobody is present. The machine also can be commanded remotely to send the full contents of its paper tape reader. Teletype Corporation's ASR-33 was a very popular minicomputer terminal in the 1970s. They now are considered to be obsolete.

3. Access Service Request. This is a request that a telephone company gives to another telephone company for any of many kinds of interconnectivity or data sharing needs. These requests can be between local carriers or long distance carriers and can originate with either an incumbent or an alternative company. See Access Service Request for more detail.

4. Authorized Sales Representative. Many phone companies have programs which allow interconnect or other resellers companies to resell their services — from simple local lines to T-1 lines. The phone companies often pay these companies a small commission for their sales efforts.

5. Answer Receive Ratio. A measurement of the effectiveness of a telecommunications service offering. ASR is the relationship between the number of line seizures and the number of answered (i.e., completed) calls. Did you ever get dial tone, and then a "fast busy" because the destination device is unavailable? That is not good for ASR. Did you ever get dial tone, and then an answered call because the destination device is available? That is good for ASR.

6. Average Service Rate = Percentage of calls placed that actually complete to terminating end. For instance you might hear a technician say the ASR for India is currently 15%. ASR is a term used frequently in the international arena. For instance the ASR would be much higher for calls from the USA to the United Kingdom than third world countries such as India, Zaire, Vietnam etc.

Assembler A program which translates an assembly programming language into the code of 1s and 0s used by computers. See also Assembly code and Assembly language.

Assembler code A programming language that is a close approximation of the binary machine code. Difficult to write and different for each processor.

Assembly Pertaining to the translation of a program from symbolic language into machine code. See Assembly Language.

Assembly Language A computer language for writing software. It is a language which is converted by programs called compilers or interpreters into machine language programs which consist of only 1s and 0s and which a computer can understand. Even though an assembly language consists of recognizable mnemonics and meaningful words, it's not easy to program in. It is referred to as a "low-level language". Assembly language programs run faster than high-level language programs, such as Basic, COBOL or FORTRAN, which are much easier to learn and program in. Choosing a programming language is a